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(HACCP)

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1. Total count

E-mail: emamj@ut.ac.ir

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HACCP

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%

/ cfu/cm²

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% /

°C

(°C)

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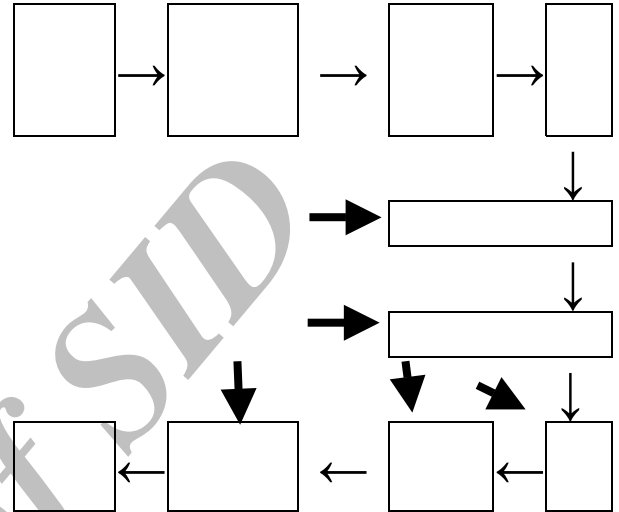
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(BA 6024 Steward Co.,UK)

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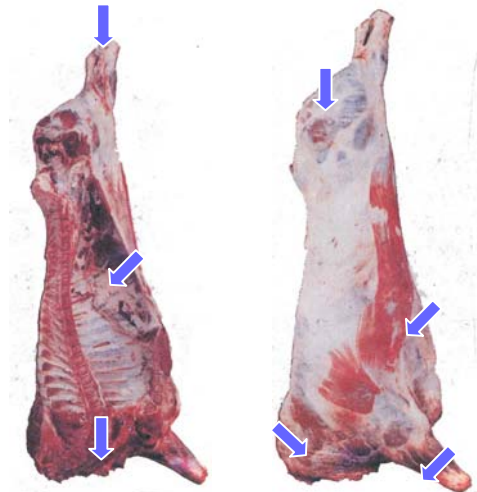
± / °C

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°C

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$$Cs = \frac{N}{V_1 f_1 + V_2 f_2 + \dots} \times Vs$$

2. Nutrient Agar (Merck Co., Germany)
3. Pour Plate
4. Shaker

) ×

1. Buffered Peptone Water (Merck Co., Germany)

() $f_2 f_1$: Cs
) V_1, V_2 : V1, V2
 : f_2, f_1
 : Vs
 : N

(/ / /) °C

) MPN

± / °C

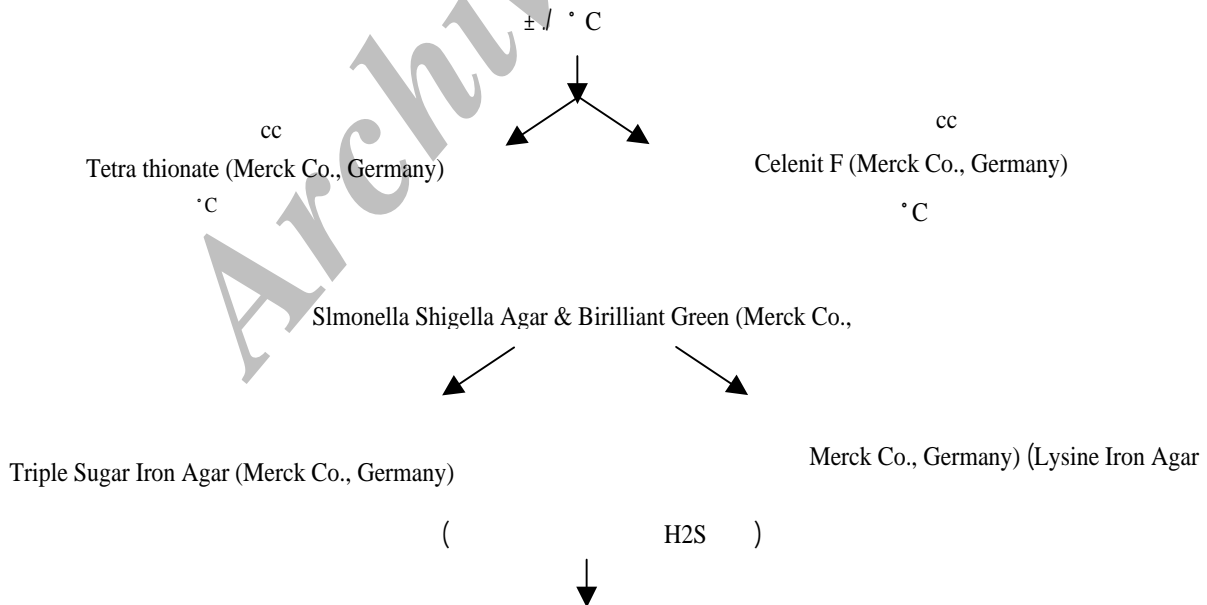
3. Indole (Merck Co., Germany)

4. Lactose Broth (Merck Co., Germany)

5. Most Probable Number

1. Double Brilliant Green (Merck Co., Germany)

2. Durham



...

:

log N

log cfu.cm⁻²

EXCEL

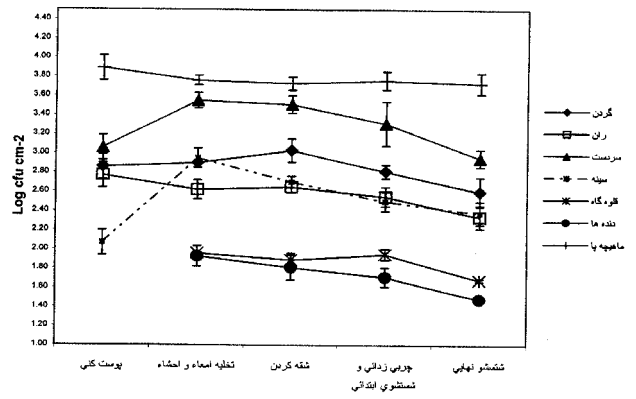
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HACCP

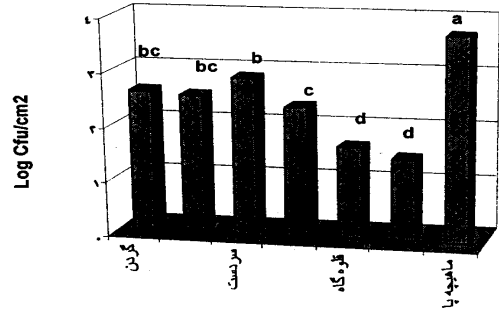


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FDA

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() (< cfu/cm²)

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() () (log N)

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HACCP

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REFERENCES

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8. Arenas, D. M, L. Huertaleidenz, & Y. Ortiz, 2002. Microbiological contamination on beef carcasses in a small abattoir in Venezuela, Published Report from University of Zuila.
9. Bayalan, M. D. Alemayehu, & W. Salah. 2002. Sources and distribution of *Salmonella* serotypes isolated from food animals, slaughterhouse personnel and retail meat products in Ethiopia: 1997-2002. *Ethiop. J. Health Dev.*
10. Cabedo, L., J. N. Sofos & G.C. Smith.1996. Removal of bacteria from beef tissue by spray washing after different times of exposure to fecal material. *J. Food Protection.* 59 (12): 1284-1287.
11. Dickson, J. S., H. S. Hurd., & M. H. Rostagno. 2003. *Salmonella* in the pork production chain. National pork Board, Des Moines, Iowa USA 50011.
12. Donkersgoed, J. 1998, Preslaughter hide status of cattle and the microbiology of carcass. *J. Food Protection.* 60 (12): 1502-1508.
13. Gannon, V. P. J. 1999. Control of *Escherichia coli* O157 :H7 at slaughter. In: *Escherichia coli* O157: H7 in farm animals, Eds: Stewart G. C. & H. J. Flint, CABI Publishing, Wallingford, UK., pp: 169-193.

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14. Geof, C. M. 1994. Microbiological hazards from red meat and their control. *British Food Journal*. 96 (8): 33-36.
 15. Gill, C. O, & J. C. McGinnis, 1999. Improvement of hygienic performance of the hindquarters skinning operations at a beef packing plant. *Int. J. Food Microbiology*. 51: 123-132.
 16. Jay, J. M. 2000. Modern Food Microbiology, 6th ed. Aspen Publishers, Inc., Gaithersburg, MD.
 17. Klaus. W, C. G. Kozub, P. J. Gannon, & E. J. Thoomas. 1997. Verification of the level of microbiological control for the slaughter and cooling processes of beef carcass production at a high-line-speed abattoir. *J. Food Protection*, 60 (12): 1509-1514.
 18. Pearse, R. A., D. J. Bolton, J. J. Sheridan, D. A. Mcdowell, I. S. Blair and D. Harrington. 2004. studies to determine the critical control points in prok slaughter hazard analysis and critical control point system. *Int. J. Food Microbiology* 90: 331-339.
 19. Ransom. J. R, K. E. Belk, J. N. Sofos, J. D. Stopforth, J. A. Scanga, & G. C. Smith. 2003. Comparison of intervention Technologies for reducing *Escherichia coli* O157: H7 on beef cuts and trimmings. *Food Protection Trends*. 23(1): 24-36.
 20. Sofos, J. N., S. L. Kochevar., G. R. Bellinger, D. R. Buege, D. D. Hancock, S. C. Ingham, J. B. Morgan, J. O. Reagan & G. C. Smith. 1999. Sources and extent of microbiological contamination of beef carcasses in seven United States slaughtering plants. *J. Food protection*. 62(2): 140-145.
 21. Sumner, J., E. Petternas, P. Dean, P. Dowsett, G. West, R. Wiering & G. Raven. 2003. Microbial contamination on beef and sheep carcasses in South Australia. *Int. J. Food Microbiology*. 81: 255-260.
 22. Varnam, A. H, 1991, Food Borne Pathogens, Wolfe Publishing Ltd.

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